PATENT ABSTRACTS OF JAPAN

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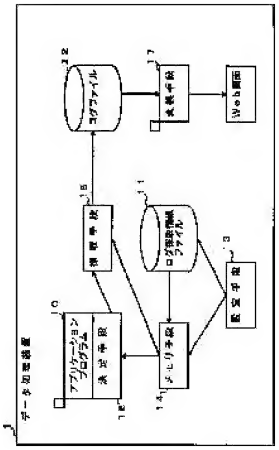
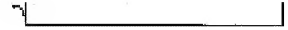
(54) LOG DATA SAMPLING AND PROCESSING SYSTEM

(57)Abstract:

PROBLEM TO BE SOLVED: To make required log data collectable by dynamically changing sampling environment during a log data sampling processing.

SOLUTION: When a log data sampling is started, a memory means 14 develops a log sampling environment which is stored in a log sampling information file 11. Then, a new log sampling environment is set by a setting means 13, the new sampling environment is developed in place of the one under development. In this case, a deciding means 15 linked with the application program(AP) 10 obtains the sampling level of log data from log sampling environment when AP 10 outputs log data, decides the propriety of the sampling of log data to be outputted and transmits the data decided to be sampled to a sampling means 16. The sampling means 16 obtains an output destination file and its size or the like by obtaining log sampling environment and transmitted data are stored in a log file 12. Then, a transforming means 17 transforms stored log data into a form to be displayed on a Web screen and displays it.





JAPANESE [JP,2000-047908,A]

[Translation done.]

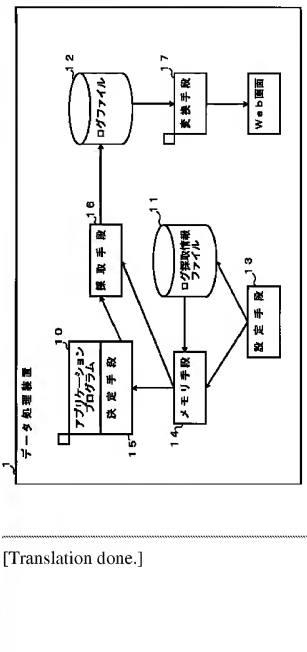
DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention]This invention relates to log data extraction mode of processing which enables it to extract the log data needed especially about log data extraction mode of processing which extracts the log data which an application program generates.
[0002]In order to improve the reliability of a system, it is necessary to leave the log data which the application program which operates by the system generates to a file, and to check the contents. It is necessary to enable it to extract the log data needed in extraction of this log data.
[0003]
[Description of the Prior Art]To drawing 6, the conventional technology of log data extraction processing is illustrated.

Drawing selection

Representative drawi

本発明の原理構成図



[Translation done.]

[0004]An application program and 31 are log data output libraries 30 among a figure, What links to the application program 30, is provided, and receives and outputs the log data which the application program 30 generates, What 32 is a log extraction information file and manages log extraction information (log extraction environment), including the level etc. of the log data to extract, According to the log extraction information which 33 is a log extraction program and is managed by the log extraction information file 32, What extracts the log data which the log data output library 31 outputs, 34 is a log file, and what stores the log data which the log extraction program 33 extracts, and 35 are log display commands, they read the log data stored in the log file 34, and display it on a display screen.

[0005]In extraction processing of the conventional log data constituted in this way, the log extraction program 33 reads log extraction information from the log extraction information file 32 at the time of starting, as shown in ** in a figure. And since the log data output library 31 will output the log data if the application program 30 generates log data, As shown in ** in a figure, when receiving it, determining whether to be extracting the log data according to the log extraction information read at the time of starting and determining to extract, As shown in ** in a figure, according to the log extraction information read at the time of starting, the log data is written in the log file 34.

[0006]Thus, in the former the log extraction program 33, At the time of starting, log extraction information is read from the log extraction information file 32, While determining whether to be extracting the log data which the application program 30 generates according to the read log extraction information, It was processing so that the log data which the application program 30 generates might be extracted by determining an output destination change file, an output destination change file size, etc. of log data.

[0007]

[Problem(s) to be Solved by the Invention]However, the log extraction level which will be specified for log extraction information if such conventional technology is followed, When it is going to extract log data for another log extraction information from the output destination change file of log data, the output destination change file size of log data, etc. being determined at the time of starting, After changing log extraction information, there was a problem

that the log extraction program 33 had to be rebooted.
[0008]Generally the log data which the application program 30 generates did not have reproducibility in many cases, and when conventional technology was followed from now on, there was a problem that the log data needed was unextractable.
[0009]And in conventional technology the log data output library 31, log data is extracted -- in spite of not having carried out, the composition which passes all the log data which the application program 30 generates to the log extraction program 33 is taken, and there was also a problem that the load of a system will become large from now on.
[0010]This invention was made in view of this situation, and is ****. The purpose is offer of new log data extraction mode of processing which exists when taking the composition which extracts the log data which ** generates, and enables it to extract the log data needed.

[0011]
[Means for Solving the Problem]Principle composition of this invention is illustrated to drawing 1.
[0012]Among a figure, one is a data processing device possessing this invention, and has the function to extract log data which the application program 10 generates.
[0013]This data processing device 1 is provided with the following.
In order to extract log data which the application program 10 generates, it is the log extraction information file 11.
Log file 12.
Setting-out means 13.
The memory means 14, the determination means 15, the extraction means 16, and the conversion method 17.

[0014]The log extraction information file 11 stores extraction environment of log data. The log file 12 stores extracted log data. The setting-out means 13 sets up extraction environment of log data, and registers it into the log extraction information file 11.
[0015]The memory means 14 develops log extraction environment updated dynamically. The determination means 15 is linked to the application program 10, is formed, and it determines whether to be extracting log data which the application program 10 generated.

[0016]The extraction means 16 extracts log data passed from the determination means 15, and stores it in the log file 12. The conversion method 17 changes log data stored in the log file 12 into form which can be expressed as a Web screen.

[0017]In the data processing device 1 possessing this invention constituted in this way. When the memory means 14 develops log extraction environment stored in the log extraction information file 11 in an extraction start of log data and log data is extracted after that, When extraction environment of new log data is set up by the setting-out means 13, it replaces with extraction environment under deployment, and the extraction environment newly set up is developed.

[0018]In response to extraction environment of log data developed by this memory means 14, the determination means 15 formed by linking to the application program 10, An extraction level of log data is acquired by acquiring extraction environment of log data developed by the memory means 14, when the application program 10 generates log data, The extraction means 16 is passed about log data which determined whether to have been extracting log data which the application program 10 generated according to it, and determined to extract.

[0019]In response to log data passed, from this determination means 15, the extraction means 16, By acquiring extraction environment of log data developed by the memory means 14. An output destination change file, an output destination change file size, etc. of log data are acquired, and log data which the application program 10 generated is extracted by storing in the log file 12 log data passed from the determination means 15 according to it.

[0020]In response to extraction processing of this extraction means 16, the conversion method 17 is reading log data stored in the log file 12, and changing into form which can be expressed as a Web screen, and a display of log data based on a Web screen is realized.

[0021]Thus, according to this invention, log data needed can be extracted now from the ability of extraction environment of log data to be dynamically changed now in the middle of extraction processing of good data.

[0022]And the determination means 15 formed by linking to the application program 10, Since it processes so that not all log data that the application program 10 generates may be

passed to an extraction means 16 to perform extraction processing and only what is needed may be passed, load of a system can be reduced greatly.

[0023]

[Embodiment of the Invention]Hereafter, according to an embodiment, this invention is explained in detail.

[0024]One example of the data processing device which possesses an invention in drawing 2 is illustrated.

[0025]An application program and 21 are log configuration programs 20 among a figure, What sets up log extraction information (log extraction environment), including the log level etc. of the log data which the setting request of log extraction information is answered, starts, and is extracted, 22 is a log extraction information file, and what stores the log extraction information which the log configuration program 21 sets up, and 23 are shared memories, they are generated synchronizing with starting of a system and develop the log extraction information which the log configuration program 21 sets up.

[0026]Referring to the log extraction information which 24 is a log data output library, is linked to the application program 20, is provided, and is developed by the shared memory 23. What chooses and outputs the log data which serves as a candidate for extraction out of the log data which the application program 20 generates, and 25 are log extraction programs, and reside in a system permanently, The log data which the log data output library 24 outputs is extracted referring to the log extraction information developed by the shared memory 23.

[0027]What 26 is a log file and stores the log data which the log extraction program 25 extracts, 27 is a log display program, and the log data stored in the log file 26 is read, and it changes into the form which can be expressed as a Web screen by attaching a tag, and displays on the Web screen 28 of the terminal unit arranged at a self-device or remoteness.

[0028]One example of the process flow which the log data output library 24 performs to one example of the process flow which the log extraction program 25 performs to one example of the process flow which the log configuration program 21 performs to drawing 3, and drawing 4, and drawing 5 is illustrated.

[0029]Next, according to these process flows, extraction processing of the log data performed by this invention is

explained in detail.

[0030]If the setting request of log extraction information is published from a user, as shown in the process flow of drawing 3, first, the log configuration program 21 will be Step 1, and will read the log extraction information developed by the shared memory 23.

[0031]To the shared memory 23, so that it may mention later by processing of the log extraction program 25. By processing of the log configuration program 21 in which the log extraction information stored in the log extraction information file 22 is developed as an initial state, and it explains after this. Since the log extraction information updated from that log extraction information is developed, in this step 1, the log extraction information developed by the shared memory 23 comes to hand.

[0032]Then, new log extraction information is set up by updating log extraction information by user interaction, expressing the log extraction information which came to hand by processing of Step 1 to a display screen as Step 2.

[0033]Then, the log extraction information developed by the shared memory 23 is changed into the newest thing that a user wishes by writing the log extraction information updated by processing of Step 2 in the shared memory 23 at Step 3.

[0034]Then, at Step 4, the log extraction information updated by processing of Step 2 is stored in the log extraction information file 22, and processing is ended.

[0035]Thus, if the setting request of log extraction information is published from a user, the log configuration program 21 will be processed so that the log extraction information developed by the shared memory 23 may be updated to the newest thing.

[0036]On the other hand, if the log extraction program 25 is started synchronizing with starting of a system, as shown in the process flow of drawing 4 (a), first, it will be Step 1 and will read log extraction information from the log extraction information file 22.

[0037]Then, at Step 2, the read log extraction information is written in the shared memory 23, and the processing at the time of starting is ended.

[0038]Thus, if started synchronizing with starting of a system, the log extraction program 25 will be processed so that the log extraction information stored in the log extraction information file 22 may be developed to the

shared memory 23. Thus, the log extraction information developed by the shared memory 23 will be dynamically updated by the log configuration program 21 according to the process flow of drawing 3 mentioned above.

[0039]On the other hand, if the application program 20 generates log data, as shown in the process flow of drawing 5, first, the log data output library 24 will be Step 1, and will obtain log extraction information from the shared memory 23.

[0040]By then, the thing for which the log level (it is specified whether it is extracting) which the log extraction information which came to hand by processing at Step 1 directs at Step 2 is compared with the level of the log data which the application program 20 generated. It determines whether to be extracting the log data which the application program 20 generated.

[0041]Then, when judging considering it as the log data for extraction at Step 3 according to processing of Step 2. It progresses to Step 4, the log data which the application program 20 generated is passed to the log extraction program 25, processing is ended, and when judging not considering it as the log data for extraction, processing is ended as it is.

[0042]Thus, the log data output library 24, If the application program 20 generates log data, the log extraction information which is developed by the shared memory 23 and which is changed dynamically will come to hand, When judging whether it is considering it as the log data for extraction according to it and judging considering it as the candidate for extraction, it processes so that the log data may be passed to the log extraction program 25.

[0043]On the other hand, if the log data output library 24 outputs the log data used as the candidate for extraction, as shown in the process flow of drawing 4 (b), first, the log extraction program 25 will be Step 1, and will receive the log data which the log data output library 24 outputs.

[0044]Then, log extraction information comes to hand from the shared memory 23 at Step 2. Then, by storing in the log file 26 the log data which the log data output library 24 outputs by Step 3 according to the output destination change file and output destination change file size of log data which the log extraction information which came to hand by processing directs at Step 1, log data is extracted and processing is ended.

[0045]Thus, if the log data output library 24 outputs the log data used as the candidate for extraction, the log extraction program 25 will obtain the log extraction information which is developed by the shared memory 23 and which is changed dynamically, and it will process it according to it so that the log data may be extracted.
[0046]Thus, also when the application program 20 has generated the log data in this invention, The composition which enables it to change log extraction information dynamically is taken, and the composition which enables it to extract the log data needed by extracting log data according to the log extraction information changed dynamically is taken.
[0047]If the log display program 27 shown in drawing 2 has a display requirement of the log data stored in the log file 26, The log data stored in the log file 26 is read, and it changes into the form which can be expressed as a Web screen by attaching a tag, and displays on the Web screen 28 of the terminal unit arranged at a self-device or remoteness.
[0048]By preparing this log display program 27, the content confirmation of the log data from a remote place becomes possible, and can improve operativity now greatly.
[0049]
[Effect of the Invention]As explained above, according to this invention, the log data needed can be extracted now from the ability of the extraction environment of log data to be dynamically changed now in the middle of extraction processing.
[0050]And the log data output library provided by linking to an application program, Since it processes so that not all the log data that an application program generates may be passed to a log extraction program and only what is needed may be passed, the load of a system can be reduced greatly.

[Translation done.]